MAR 3 1 2014

6. *510(k) Summary*

This 510(k) summary information is being submitted in accordance with the requirements of SMDA 1990 and 21 CFR 807.92.

APPLICANT:	Pinnacle Spine Group, LLC
DATE PREPARED:	March 22, 2014
CONTACT PERSON:	Rebecca K Pine 1601 Elm Street, Suite 1930 Dallas, TX 75201 Phone: 760.809.5178 Fax: 760.290.3216
TRADE NAME:	InFill® 41-TLIF Convex Oblique device, InFill® 43-TLIF Contour Oblique, InFill® 44-TLIF Contour Oblique and the InFill® 60-ALIF
COMMON NAME:	Spinal Implant
CLASSIFICATION NAME:	Intervertebral Body Fusion Device
DEVICE CLASSIFICATION:	Class II
REGULATION NUMBER	888.3080 (product code: MAX)
PREDICATE DEVICES:	InFill Interbody Fusion Device (K103729, K121733, K124012) Novel TL Spinal Spacer System, (K080699) Calix-A Lumbar Spinal Implant System (K131350) Enclave Anterior Spacer (K081636)

Substantially Equivalent To:
The InFill® 41-TLIF Convex Oblique device, InFill® 43-TLIF Contour Oblique, InFill® 44-TLIF Contour Oblique and the InFill® 60-ALIF devices are substantially equivalent in intended use, principal of operation and technological characteristics to the InFill Interbody Fusion Device, Novel Spinal Spacer System and the Calix-A Lumbar Spinal Implant System.

Description of the Device Subject to Premarket Notification:

The InFill® 41-TLIF Convex Oblique device, InFill® 43-TLIF Contour Oblique, InFill® 44-TLIF Contour Oblique and the InFill® 60-ALIF are radiolucent implantable devices manufactured from PEEK and tantalum (marker material). The implants are available in various sizes to suit the individual pathology and anatomical conditions of the patient.

The InFill® 41-TLIF Convex Oblique device, InFill® 43-TLIF Contour Oblique, InFill® 44-TLIF Contour Oblique and the InFill® 60-ALIF are provided sterile, for single use

only.

Indication for Use:

InFill® interbody fusion device is indicated for intervertebral body fusion of the spine in skeletally mature patients. InFill® interbody fusion device is designed for use with autogenous bone graft to facilitate fusion. InFill® interbody fusion device is intended for use at either one level or two contiguous levels in the lumbar spine, from L2 to S1, for the treatment of degenerative disc disease (DDD) with up to Grade I spondylolisthesis. DDD is defined as back pain of discogenic origin with degeneration of the disc confirmed by history and radiographic studies. The lumbar devices are to be used in patients who have had at least six months of non-operative treatment. InFill® interbody fusion device is intended to be used with supplemental internal spinal fixation systems that are cleared by the FDA for use in the lumbar spine. These implants may be implanted via a variety of open or minimally invasive approaches. These approaches include anterior, lateral and transforaminal.

Technical Characteristics:

The InFill® 41-TLIF Convex Oblique device, InFill® 43-TLIF Contour Oblique, InFill® 44-TLIF Contour Oblique and the InFill® 60-ALIF have similar physical and technical characteristics to the predicate devices, as illustrated in the table below.

Technical Characteristics	**InFill® intervertebral body fusion devices, (41-TLIF Convex Oblique, 43-/44-TLIF Contour Oblique, 60-ALIF)**	**InFill® intervertebral body fusion device (K103729, K121733, K124012)**	**Novel TL Spinal Spacer System, (K080699)**	**Calix-A Lumbar Spinal Implant System (K131350)**	**Biomet Enclave (K081636)**
Shape	Box-shaped, bullet nose Oval shape, bullet nose Banana-shaped, bullet nosed	Box-shaped, bullet nose	Banana-shaped, bullet nosed	Oval shape, bullet nose	Oval shape, bullet nose
Bone to implant surface	Surface teeth	SAME	SAME	SAME	SAME
Bone graft support feature	Central fenestration	SAME	SAME	SAME	SAME
Primary implant material	PEEK OPTIMA ®	SAME	SAME	SAME	SAME
Surgical Approach	Transforaminal Anterior	Lateral Transforaminal	Transforaminal	Anterior	Anterior

Performance Data:

All necessary performance testing, has been completed for the InFill® 41-TLIF Convex Oblique device, InFill® 43-TLIF Contour Oblique, InFill® 44-TLIF Contour Oblique and the InFill® 60-ALIF devices including static/dynamic compression (ASTM F2077), static subsidence (ASTM F2267) and expulsion to assure substantial equivalence to the predicate devices.

Basis for Determination of Substantial Equivalence:

Upon reviewing the performance data provided in this submission and comparing intended use, design, materials, principle of operation and overall technological characteristics, the InFill® 41-TLIF Convex Oblique device, InFill® 43-TLIF Contour Oblique, InFill® 44-TLIF Contour Oblique and the InFill® 60-ALIF devices are determined by Pinnacle Spine Group, LLC, to be substantially equivalent to existing legally marketed devices.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
10903 New Hampshire Avenue
Document Control Center – WO66-G609
Silver Spring, MD 20993-0002

March 31, 2014

Pinnacle Spine Group, LLC
% Ms. Rebecca K. Pine
Consultant
1601 Elm Street, Suite 1930
Dallas, Texas 75201

Re: K133721
Trade/Device Name: Infill® Interbody Fusion Devices (Infill® 41-TLIF Convex Oblique, Infill® 43-TLIF Contour Oblique, Infill® 44-TLIF Contour Oblique, and the Infill® 60-ALIF)
Regulation Number: 21 CFR 888.3080
Regulation Name: Intervertebral body fusion device
Regulatory Class: Class II
Product Code: MAX
Dated: January 9, 2014
Received: January 10, 2014

Dear Ms. Pine:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set

forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638 2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm.

Sincerely yours,

Ronald P. Jean -S for

Mark N. Melkerson
Director
Division of Orthopedic Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration

Indications for Use

Form Approved: OMB No. 0910-0120
Expiration Date: January 31, 2017
See PRA Statement below.

510(k) Number *(if known)*
K133721

Device Name
InFill® Interbody Fusion Devices

Indications for Use *(Describe)*
InFill® interbody fusion device is indicated for intervertebral body fusion of the spine in skeletally mature patients. InFill® interbody fusion device is designed for use with autogenous bone graft to facilitate fusion. InFill® interbody fusion device is intended for use at either one level or two contiguous levels in the lumbar spine, from L2 to S1, for the treatment of degenerative disc disease (DDD) with up to Grade I spondylolisthesis. DDD is defined as back pain of discogenic origin with degeneration of the disc confirmed by history and radiographic studies. The lumbar devices are to be used in patients who have had at least six months of non-operative treatment. InFill® interbody fusion device is intended to be used with supplemental internal spinal fixation systems that are cleared by the FDA for use in the lumbar spine. These implants may be implanted via a variety of open or minimally invasive approaches. These approaches include anterior, lateral and transforaminal.

Type of Use *(Select one or both, as applicable)*

☒ Prescription Use (Part 21 CFR 801 Subpart D) ☐ Over-The-Counter Use (21 CFR 801 Subpart C)

PLEASE DO NOT WRITE BELOW THIS LINE – CONTINUE ON A SEPARATE PAGE IF NEEDED.

FOR FDA USE ONLY

Concurrence of Center for Devices and Radiological Health (CDRH) *(Signature)*

Anton E. Dmitriev, PhD

Division of Orthopedic Devices

This section applies only to requirements of the Paperwork Reduction Act of 1995.

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